

THE NOISE ELEMENT
OF THE
GENERAL PLAN

CITY OF
SOUTH SAN FRANCISCO, CALIFORNIA

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THE FOLLOWING NOISE ELEMENT OF THE GENERAL PLAN CONTAINS ONLY BOOK ONE OF THIS ELEMENT WHICH CONTAINS ALL OF THE GOALS, POLICIES, PROGRAMS, AND OFFICIAL POSITION OF THE RECOMMENDATION.

BOOK TWO OF THE NOISE ELEMENT, WHICH IS NOT INCLUDED, IS A TECHNICAL REPORT CONTAINING APPROXIMATELY 72 PAGES.

BOOK THREE OF THE NOISE ELEMENT, WHICH IS ALSO NOT INCLUDED, IS THE ENVIRONMENTAL IMPACT REPORT FOR THIS DOCUMENT CONTAINING APPROXIMATELY 151 PAGES.

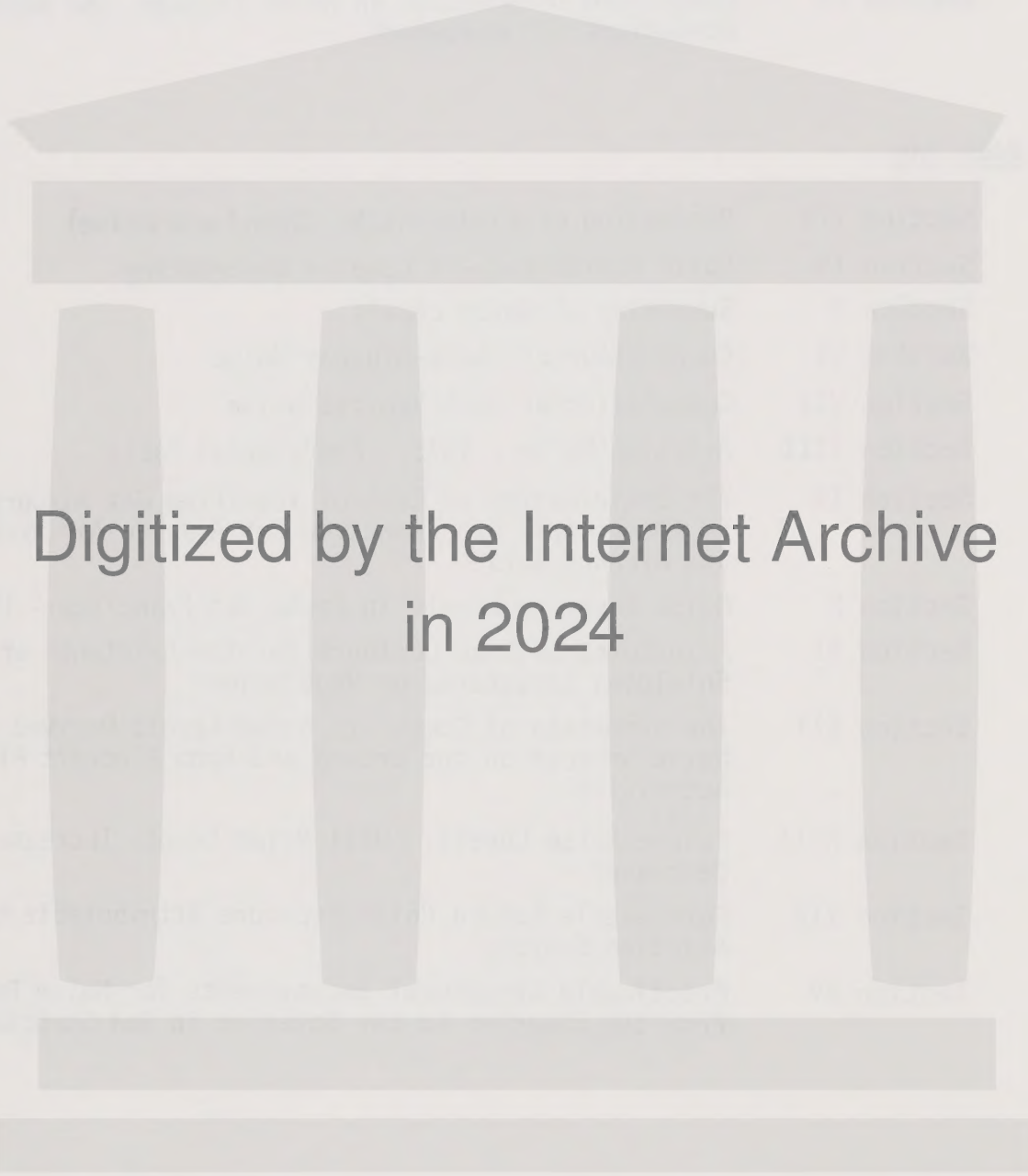
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INTRODUCTION

A. Organization of the Noise Element

The Noise Element is divided into two separately printed documents: Book One and Book Two.

Book One is a goals, policies, and programs document. It contains an introduction, a listing of goals, policies, and programs for abating noise in South San Francisco, and background information and data on noise problems confronting the City.

Book Two is a compendium of technical reports which describe the scientific background and technical methodology employed in the preparation of the Noise Element. It as well provides information on predicted City noise levels for the future.

B. Legislative Mandate

State law requires that each city and county in California adopt a Noise Element as part of its General Plan. Section 65302(g) of the California Government Code stipulates that the General Plan shall include:

A noise element in quantitative, numerical terms, showing contours of present and projected noise levels associated with all existing and proposed major transportation elements. These include but are not limited to the following:

- (1) Highways and freeways;
- (2) Ground rapid transit systems;
- (3) Ground facilities associated with all airports operating under a permit from the State Department of Aeronautics.

These noise contours may be expressed in any standard acoustical scale which includes both the magnitude of noise and frequency of its occurrence. The recommended scale is sound level A, as measured through the A-weighted network of a standard sound level meter, with corrections added for the time duration per event and the total number of events per 24-hour period.

Noise contours shall be shown in minimum increments of five decibels and shall be continued down to 65 dB(A). For regions involving hospitals, rest homes, long-term medical or mental care, or outdoor recreational areas, the contours shall be continued down to 45 dB(A).

Conclusions regarding appropriate site or route selection alternatives or noise impact upon compatible land uses shall be included in the general plan.

The state, local, or private agency responsible for the construction or maintenance of such transportation facilities shall provide to the local agency producing the general plan, a statement of the present projected noise levels of the facility, and any information that was used in the development of such levels.

In addition to the legislative mandate, the California Council on Intergovernmental Relations (CIR) provides guidelines to cities and counties for the formulation of Noise Elements. These guidelines, which greatly expand the scope and nature of the law, have been applied in the preparation of this document.

C. Purpose and Scope

The purpose of the Noise Element is to establish public policy on the present and future noise climates of the City and to provide a decision-making framework which will guide the City in abating noise in the community.

The Noise Element presents a description of the present noise environment of the City. In particular, the Noise Element provides:

- (1) an identification of noise sources, e.g. automotive vehicular noise, railroad noise, airport-flight and operations noise, industrial noise;
- (2) a measurement of the extent and an analysis of the effect of noise emanating from these sources; and
- (3) a formulation of goals, policies, and programs aimed at abating the propagation and transmission of noise emanating from these sources.

In addition to abating noise generation and transmission, the Noise Element provides for:

- (4) the inclusion of noise considerations in all future land use decisions;
- (5) the adoption of a City Building Noise Insulation Ordinance; and
- (6) the protection of noise abatement flightpaths by limiting building heights and by controlling light sources and light reflections.

The Noise Element also supplies a description of the future noise environment of the City. This description, based on projections forecasted for 1985 and 1995 road traffic, railroad traffic, and aircraft conditions, indicates a reduction in numerical values of present noise levels in the City.

D. Methodology

- (1) Community Noise Equivalent Level (CNEL):

The measure of noise in the Noise Element has been expressed in terms of the Community Noise Equivalent Level (CNEL). The CNEL is an average of sound energy levels measured over a 24 hour

period. As well, it is an average measure that is "period-weighted," because it gives greater importance to evening noises (7:00 p.m. to 10:00 p.m.) and to nighttime noises (10:00 p.m. to 7:00 a.m.). Weighting of evening and nighttime noises is justified because of the greater noise sensitivity of people at night due to lower background noise levels and to the intrusive effect of noise on sleep. In the computation of CNEL levels, noise exposure levels in the evening (7:00 p.m. to 10:00 p.m.) are multiplied by a factor of 3, while noise exposure levels at night (10:00 p.m. to 7:00 a.m.) are multiplied by a factor of 10. Section III, Book Two, more fully defines and explains the computation of the Community Noise Equivalent Level.

(2) CNEL Determination:

The CNEL attributable to the four primary noise sources that affect the City of South San Francisco has been obtained by the following means and methods:

a. Freeways and other numbered State routes:

The noise-contour maps provided by the Division 04 (Highways) of the California Department of Transportation (Cal Trans), showing values of the ten-percent exceedence level, L_{10} , were translated into CNEL values.

Actual measurements were then made to ascertain and verify the validity of the CNEL values that were thus obtained.

b. City streets with peak-hour traffic volume of over 200 vehicles:

Actual noise measurements were made at a number of representative stations, and standard calculation methods, reflected in the Technical Report, BOOK TWO, of this Noise Element, were applied to obtain CNEL values for traffic data that were supplied by the City of South San Francisco and the County of San Mateo.

c. Railroads:

The CNEL was determined by calculations based on a generalized technical "how-to-do-it" report issued by the Southern Pacific Transportation Company (SPTC) and on schedules and information on train lengths and speeds which were also supplied by the SPTC.

Precision noise measurements were performed along individual segments on the rail lines passing through the City of South San Francisco.

d. Aircraft:

Actual noise measurements were taken at numerous locations throughout the City. Use was also made of calculations made by consultants for the City of South San Francisco, the San Francisco International Airport, and the Association of Bay Area Governments.

Noise monitoring included collecting cumulative statistical noise distributions according to the share of time at which certain dB levels prevailed at given locations and analyzing in detail monitored individual noise events. The totals obtained were used to determine and verify the overall cumulative CNEL values.

(3) 1975 Noise Contours:

In compliance with the provisions of California Government Code Section 65302(g), contours were drawn through points having uniform CNEL values in the City at 5-decibel intervals on two sets of graphs which, in full scale, comprise transparent noise-contour overlays for the San Mateo County 400-foot-to-the-inch orthophoto air photographs, terrain contour charts, and street maps.

One set of maps comprises contours of equal community noise equivalent levels (CNEL) produced by dominant noise sources on the ground, namely transportation noise sources on roads, highways, and streets in combination with other diffused urban sounds.

A second set of maps, prepared and adopted by the Airport Land Use Committee of San Mateo County, comprises contours of equal annual CNEL attributable to aircraft noise. Inasmuch as the annual aircraft generated CNEL has a marked two-season fluctuation that is controlled by the wind-conditioned utilization of runways at the San Francisco International Airport for takeoff, the set of annual CNEL contours should be understood to depict CNEL values that are approximately 3 dB higher during the "summer season" (May through September) and approximately 10 dB lower during the "winter season" (October through April). Thus, for example, the "70 dB annual CNEL" contour represents the "73 dB summer CNEL" and the "60 dB winter CNEL."

Because of the size of the two sets of CNEL contours and the mechanical difficulty and cost of small-scale reproductions for inclusion in the present draft Noise Element, the full-scale charts have been deposited solely with the City Planning Division for public inspection. Upon approval of the draft Noise Element by the City Council following the public hearings, the final Noise Element will be printed with the inclusion of page-size reproductions of the CNEL contour charts.

For reasons stated in Book Two, it has not been found practicable to draw a set of comprehensive charts showing the combined total of ground-source produced and aircraft produced CNEL throughout the City. A simple methodology is provided in Section XII, Book Two, for the summation of CNEL's derived from noise sources on the ground and from aircraft flight activities.

(4) Future Noise Contours:

For reasons set forth in Sections VI and XIV, Book Two, it is concluded that the following overall changes in the numerical values of the CNEL's in the City will be realized in 1985 and 1995, if, however, there are no significant changes in the geometric shape of the CNEL contours:

<u>SOURCE OF NOISE</u>	<u>CNEL in 1985</u>	<u>CNEL in 1995</u>
Total road traffic	5 dB less than in 1975	7 dB less than in 1975
Railroad traffic	7 dB less than in 1975	10 dB less than in 1975
Aircraft flight operations (primarily with reference to the San Francisco International Airport)	8 dB less than in 1975	12 dB less than in 1975

E. Standards

Noise levels in South San Francisco should be maintained or reduced to levels which are compatible with various types of land uses. Any noise abatement program should have established noise exposure level standards which act as targets or guides for noise reduction strategies. The following exterior noise exposure levels are suggested for application in South San Francisco pending the anticipated formulation and adoption of such criteria by State and Federal governments.

(1) Residential With Anticipated Outdoor Activities:

Total annual exterior CNEL 68 dB, of which up to 65 dB may be contributed by aircraft and aircraft-engine noise, except that nighttime HNL* shall not exceed 55 dB.

This category includes all but high-rise hotel, motel, and apartment house residential land use.

* HNL, the hourly noise level in decibels, as defined in Title 4, Subchapter 6, Section 5006 (e), of the California Administrative Code, is the average noise level during a particular hour, obtained by an averaging on an energy basis over the period of that hour. Substantially the same as the average equivalent hourly noise level, (L_{eq})_{hr}, as defined by the U.S. Environmental Protection Agency. HNL values for the 24-hour daily period are on file in the City Offices for streets which exceed an hourly traffic volume of 200 vehicles (non-directional). HNL values for air traffic during the day are deemed to be numerically equal to the CNEL at a given location (for the day-and-night traffic distribution currently obtained in the San Francisco Bay Area); HNL's at night are estimated to be 10 decibels lower in number than the stated CNEL at a given location.

(2) Residential Without Anticipated Outdoor Activities:

Total annual exterior CNEL 70 dB, of which up to 67 dB may be contributed by aircraft and aircraft-engine noise, except that nighttime HNL shall not exceed 55 dB.

This category includes hotels, motels and high-rise apartment houses.

(3) Schools, Churches, and Concert Halls:

HNL not to exceed 65 dB total during hours of contemplated activity.

(4) Office Buildings and Other Commercial Establishments:

HNL not to exceed 70 dB total during hours of contemplated activity.

(5) Industrial Establishments with Self-Generated Interior Noise Levels NOT Exceeding 45 dB:

Same as category (3).

(6) Industrial Establishments with Self-Generated Interior Noise Levels Not Exceeding 45 dB:

HNL_{exterior} not to exceed: (HNL_{interior} plus 25 dB).

(7) Recreational Areas:

Total HNL 65 dB during activity periods.

GOALS, POLICIES, PROGRAMS, AND OFFICIAL POSITIONS AND RECOMMENDATIONS

This portion of the Noise Element for the General Plan of the City of South San Francisco is an abridged agenda, that is, a list of action items for the reduction of abatable noise and for community planning in the presence of unabatable noise for the benefit of the City.

The background of each action item, the reason for the need for its resolution, and a summary of benefits to be derived from its implementation will be found in the full text of Section II, "Background Information on Noise Problems and Recommendations for Abatement."

All action items are classified as follows:

1. Goals. The objectives to be achieved.
2. Policies. The general courses or methods whereby the City should seek to achieve the goals or objectives.
3. Programs. The specific courses of action that the City, its governing body, its commissions and boards, and its management and administration should pursue to implement the adopted policies within its own sphere of jurisdiction and responsibility.
4. Official Positions and Recommendations. The specific courses of action that the City wishes to cause other governmental agencies to adopt and pursue in a common endeavor to achieve goals that are of mutual benefit.

Goals, policies, programs, and official positions and recommendations are listed in a technically logical order and not in an intended order of priority. It is anticipated that the City of South San Francisco will subsequently develop and update from time to time, as necessary, action programs and checklists of action items in an approximate order of importance and need and in an order that reflects the practical feasibility of a realistic implementation schedule.

GOAL 1: ABATE UNNECESSARY NOISE FROM AUTOMOTIVE VEHICLES

Policy 1

Enforce noise emission standards for all types of automotive vehicles established by the California Vehicle Code and by Federal regulations.

Program 1(1)

Establish means for:

- (a) an identification of apparent violators;
- (b) a verification of noise levels produced by identified vehicles;
- (c) a verifiable and certifiable correction of any defect.

This could be accomplished, in part, by the creation of an Environmental Standards Section and a Noise Abatement Enforcement Unit in the city.

Reference: Topic I-1, p. II-5, Section II, Background Information on Noise Problems and Recommendations for Abatement *

Policy 2

Reduce noise exposure levels produced by noise emissions from heavy passenger buses.

Program 2(1)

Reduce noise emissions on any city-owned buses by suppressing engine noise and exhaust noise.

Program 2(2)

Locate bus stops in places where bus noises will not impinge on school sites or on places where large numbers of people congregate to communicate by speech.

Program 2(3)

Provide means for traffic control to maintain a smooth flow of traffic on main thoroughfares adjacent to school sites and other places of mass assembly; suppress traffic at cross streets.

Official Position and Recommendation 2 (4)

Urge operators of buses to reduce unnecessary noise emissions from engines and exhaust mufflers.

* All references refer to topics listed in Section II. Reference citations are provided for the convenience of the reader so as to acquaint him or her with background information which lead to the formulation of each policy and/or program.

GOAL 1 (continued)

Official Position and Recommendation 2(5)

Urge operators of bus lines to introduce electric trolley buses as soon as traffic density and headway justify it.

Reference: Topic I-2, p. II-6

Policy 3

Investigate means of reducing noise from city-owned vehicles.

Program 3(1)

Reduce noise emissions by establishing noise criteria for evaluation of vehicles offered for sale to the City.

Program 3(2)

Verify the actual noise performance of city-owned vehicles as part of the routine maintenance schedule. Establish maximum noise levels as a criterion for repair or replacement of components.

Reference: Topic I-3, p. II-7

Policy 4

Reduce traffic noise impingement on dwellings by establishing supplementary, noise-oriented criteria for setback of building lines and terracing or staggering of two-story and multi-story buildings.

Program 4(1)

Develop guidelines for architectural committee to use in evaluating adequate building setbacks and terracing or staggering techniques for structures on streets for which the present or highest future CNEL exceeds 70 dB at the curblane.

Reference: Topic II-1(c) and II-1(d), p. II-17

Policy 5

Keep trucks off residential streets as much as possible.

Program 5(1)

Establish and update at regular intervals a system of truck routes through the City and establish and maintain a prohibition against use of residential streets by trucks.

GOAL 1 (continued)

Program 5(2)

Investigate the feasibility of extending or constructing new truck routes through the City without impinging on residential areas.

Reference: Topic II-1, p. II-15

Official Position and Recommendation 5(3)

Consider the possibility of limiting the use of Interstate Route 280 by trucks in conjunction with other cities and the State of California.

Policy 6

Mitigate the environmental impact on the City of South San Francisco from ground-access traffic to and from the San Francisco International Airport.

Official Position and Recommendation 6(1)

Establish and maintain an official City position which supports collective or mass transit connectors to the Airport.

Reference: Topic II-1(b), p. II-15

Policy 7

Construct, or have constructed with support from the State of California, noise barriers along selected route segments of Freeway Routes 280 and 101.

Program 7(1)

Request consideration by the State of California of requests for noise barriers along freeway route segments specified in "Topic III-1(a)" of Section II of this Noise Element, pursuant to the circular letter from the Department of Transportation dated January 9, 1975, entitled, "Proposed Noise Attenuation Projects on Existing Freeways."

Reference: Topic III-1(a), p. II-38

Policy 8

Consider the possibility and advisability of the construction of noise barriers along selected segments of streets in South San Francisco.

Program 8(1)

Initiate a program for the investigation of acoustic needs and effectiveness, aesthetic aspects, and possible security problems of noise barriers along selected segments of streets in South San Francisco, and also along portions of frontages of schools and other public buildings.

Reference: Topic III-1(b), p. II-39

GOAL II: ABATE UNNECESSARY NOISE FROM RAILROAD LINES

Policy 1

Assist in achieving the compliance by all concerned with noise emission standards for locomotives and other equipment of interstate railroads set by the Environmental Protection Agency and other agencies of the Federal Government and the State of California.

Official Position and Recommendation 1(1)

Enlist the cooperation of the railroad operators to attain the following objectives:

- (a) Satisfaction of Federal standards by rolling stock.
- (b) Maintenance of roadbed, rail joints, switches, etc., to avoid excessive wheel-to-rail-to-roadbed noises and vibration.
- (c) Minimal use of acoustical signals that can be heard over an unnecessarily large area.

Reference: Topic I-5, p. II-9

Policy 2

Participate in all deliberations by decision-making bodies on future extensions of rail transit lines through South San Francisco.

Official Position and Recommendation 2(1)

CNEL not to exceed 65 dB through horizontal or vertical separation from existing noise-sensitive land uses, and/or roadbed shielding.

Reference: Topic II-2(b), p. II-19

Policy 3

Consider the possibility and advisability of the construction of noise barriers along selected segments of existing railroad lines within the City of South San Francisco.

Program 3(1)

Initiate an investigation of acoustic needs and effectiveness, aesthetic aspects, and possible security problems of noise barriers along selected segments of the railroad lines in South San Francisco.

Reference: Topic III-2, p. II-40

GOAL III: ABATE UNNECESSARY NOISE FROM INDUSTRIAL PLANTS

Policy 1

Reduce noise emanating from industrial plants or shield the community against such noise.

Program 1(1)

Obtain regular surveys of community noise attributable to industrial sources.

Official Position and Recommendation 1(2)

Enlist the cooperation of existing industrial plants to abate noise at the source or to set up protective noise barriers around prominent noise sources.

Reference: Topics I-6 and III-3, p. II-10 and p. II-40

Official Position and Recommendation 1(3)

Enlist the cooperation of existing industrial plants to replace the bull-horns, paging loudspeakers, and miscellaneous noisy horns and whistles, with acoustical signals that are audible only by those for whom the signal is intended.

Reference: Topic I-6, p. II-10

Policy 2

Make the issuance of building permits for industrial plants contingent on an assurance that operation of the proposed plant will not increase excessively the annual exterior CNEL in any residential neighborhood of the City.

Program 2(1)

Require, by ordinance, that plan approvals and building permits for new industrial plants within the City be made contingent on a certified assurance that the proposed facility will not cause the total annual CNEL in any residential neighborhood of the City to rise above 65 dB, or more than 3 dB above the CNEL prevailing there at the time of the application, whichever is lower.

Reference: Topic II-3, p. II-20

Policy 3

Protect the people of South San Francisco against intrusion of industrial noise from outside of South San Francisco.

GOAL III (continued)

Official Position and Recommendation 3(1)

Request that Noise Elements of adjacent cities and Environmental Impact Reports and Statements of proposed projects in adjacent cities describe and disclose fully any significant noise impact on the City of South San Francisco.

Program 3(2)

Respond to EIR's and EIS's with critique and constructive recommendations for noise-mitigating measures and advocate their adoption by the respective decision-making bodies.

Reference: Topic II-4, p. II-21

GOAL IV: ABATE UNNECESSARY NOISE FROM MISCELLANEOUS SOURCES

Policy 1

Enforce Federal and State Noise Standards for all miscellaneous sources of noise in the City.

Program 1(1)

Establish procedures for the detection and identification of objectionally intense noise sources.

Program 1(2)

Establish a procedure to verify violations and achieve and certify corrections.

Reference: Topic I-4, p. II-8

GOAL V: ABATE UNNECESSARY NOISE FROM AIRPORT AND FLIGHT ACTIVITIES

Part One: The San Francisco International Airport

Policy 1

Abate unnecessary noise from the San Francisco International Airport and flights to and from that Airport.

Official Position and Recommendation 1(1)

Urge the City and County of San Francisco through its Airports Commission to adopt, by resolution, an operating policy and regulations limiting the use of the Airport to aircraft certificated in accordance with Federal Aviation Regulations Part 36 (FAR 36) by a specified and agreed upon time and date.

Reference: Topic II-5(a)(1), p. II-24

Official Position and Recommendation 1(2)

Urge the City and County of San Francisco through its Airports Commission to implement noise-monitoring and disciplinary measures to enforce operation of aircraft to achieve actual compliance with the noise-exposure levels specified in FAR 36.

Reference: Topic II-5(a)(2), p. II-24

Official Position and Recommendation 1(3)

Urge the Environmental Protection Agency and the airlines to adopt and implement two or three alternative noise abatement climb procedures, designed to afford optimal noise abatement for a "close-in" area (up to three nautical miles from the takeoff runway), an "intermediate" area (three to six nautical miles from the takeoff runway), and a "distant" area (more than six nautical miles from the takeoff runway), the last procedure being designated as the "best climb" procedure.

Official Position and Recommendation 1(4)

Urge the airlines and the FAA air-traffic-control system to adopt and maintain a "best climb" procedure for all departures from SFO Runways 01.

Official Position and Recommendation 1(5)

Urge the airlines and the FAA air-traffic-control system to adopt and maintain a "close-in" or an "intermediate" noise abatement climb procedure for straight-out departures from Runways 28.

Reference: Topic II-5(a)(3)

Official Position and Recommendation 1(6)

Urge the Federal Aviation Administration (FAA) to enforce left-turn paths for southbound departures from SFO Runways 01 that will cause aircraft to recross South San Francisco at or above 7,000 feet altitude above Mean Sea Level (MSL).

Official Position and Recommendation 1(7)

Urge the FAA to continue the exploration of southbound paths from SFO over the waters of the San Francisco Bay, whenever their use is safe and practicable.

Reference: Topic II-5(a)(4), p. II-27

Policy 2

Help to abate unnecessary noise from the San Francisco International Airport in the cities of Millbrae, Burlingame, and Hillsborough.

Official Position and Recommendation 2(1)

Urge the Airports Commission of the City and County of San Francisco, the FAA, and the airlines, to make all practicable and effective provisions for an alleviation of the noise burden of the City of Millbrae and other cities south of the Airport.

Reference: Topic II-5(a)(5), p. II-28

Policy 3

Minimize heavy departures from SFO Runways 28.

Official Position and Recommendation 3(1)

Urge the Airports Commission of the City and County of San Francisco and the FAA to extend the length of Runways 01 (or, at least, Runway 01-Right) by the following two measures:

- (a) Construction of an effective jet-blast deflector at the physical threshold of Runway 01-Right, so that full thrust application can be made there without disturbing automobile traffic on Bayshore Freeway, and thereby gaining 600 feet in usable runway length.
- (b) Northward extension of Runway 01-Right (and, if possible, Runway 01-Left).

These improvements will avert numerous takeoffs from Runways 28 with subsequent shallow, low, laborious, and noisy overflights of residences in South San Francisco and the San Bruno Gap.

These improvements will also permit numerous takeoffs on Runways 01 with reduced (so-called "normal") takeoff thrust, instead of "maximum" takeoff thrust, with resulting noise abatement for Millbrae and cities south therefrom.

The improvements intended for an effective lengthening of Runways 01 should be coupled with the construction of means for the effective shielding of parts of Millbrae and Burlingame from primary jet noise from departing aircraft on Runways 01, and for the scattering of some of that noise in the area just south of Runways 01, which currently acts as a reflection bowl, an improvement that would benefit significantly the Cities of Millbrae, Burlingame, and Hillsborough.

Reference: Topic II-5 (a)(6), p. II-29

Policy 4

Favor minimization of nighttime departures. Oppose scheduling of new "Red-Eye Specials" at night.

Official Position and Recommendation 4(1)

Urge, in all decision-making bodies, that nighttime departures be minimized, except for departures by "quiet" aircraft.

Reference: Topic II-5(a)(7), p. II-31

Policy 5

Participate in the resolution of the pending controversy over the proposed Visitacion Rancho development, in order that the development not inure to the disadvantage of the City of South San Francisco.

Official Position and Recommendation 5(1)

Urge the developer, on the one hand, and the City and County of San Francisco, through its Airports Commission, on the other hand, to enter into a binding contractual arrangement whereby:

- (a) The City and County of San Francisco would agree to its faithful performance of specified measures to achieve noise abatement in the area of the Visitacion Rancho development; and
- (b) The developer, on his or its own behalf and on behalf of its successors, lessees, and assigns, would guarantee assurance of certain improvements in structural noise reduction, orientation, and design features in the proposed buildings in the Visitacion Rancho developments, and would grant the City and County of San Francisco (as the owner and operator of the San Francisco International Airport) an aviation easement and a noise easement over any and all parts of the development.

GOAL V (continued)

Reference: Topic II-5(a)(8), p. II-32

Policy 6

Abate unnecessary noise from sustained test runs and runups of aircraft engines on the ground.

Official Position and Recommendation 6(1)

Urge owners and operators of aircraft-engine test cells and test stands to ensure that noise levels of 50 dBA attributable to maximum-power runs not be exceeded in any residential neighborhood of the City.

Official Position and Recommendation 6(2)

Urge owners and operators of airport facilities to enforce rules for on-aircraft engine runups, prohibiting high-power jet-engine runups at night, and prohibiting runups near residential areas at any time, unless engine noise-suppressors are used to limit sustained noise levels in the nearest residential area of the City to 50 dBA.

Reference: Topic I-7(b), p. II-13

Program 6(3)

Identify commercially and industrially zoned areas where buildings of reasonable height could serve as an effective line-of-sight barrier against ground noise generated at the Airport, and encourage the design and site planning of proposed commercial and industrial buildings to create a shielding noise barrier for the City.

Reference: Topic III-4, p. II-40

Official Position and Recommendation 6(4)

Encourage the Airports Commission of the City and County of San Francisco to include in its plans for the development of the airport property west of Bayshore Freeway (Route 101) design and site planning criteria that would result in the construction of noise-shielding buildings between the Freeway and the city limits of the City of South San Francisco.

Reference: Topic III-4, p. II-40

Part Two: The Naval Air Station Alameda

Policy 7

Abate unnecessary noise attributable directly or indirectly to the activities of the Naval Air Station Alameda and flights to and from that Base.

Official Position and Recommendation 7(1)

Encourage the continuation of the present coordination of activities between the Federal Aviation Administration and the Naval Air Station Alameda Air-Traffic-Control toward a minimization of a noise impact of such activities on the West Bay.

Reference: Topic II-5(b), p. II-33

Part Three: The Oakland Airport

Policy 8

Abate unnecessary noise from the Oakland Airport and flights to and from that Airport.

Official Position and Recommendation 8(1)

Urge the City of Oakland, through its Board of Port Commissioners, to adopt, by resolution, an operating policy and regulations limiting the use of the Airport to aircraft certificated in accordance with Federal Aviation Regulations Part 36 (FAR 36) by a specified and agreed upon time and date.

Reference: Topic II-5(c)(1), p. II-34

Official Position and Recommendation 8(2)

Urge the airlines to have those Oakland aircraft engaged in a departure climb over or west of the San Francisco International Airport follow a "best climb" procedure, in order that they cross the City of South San Francisco as high and as quietly as possible.

Reference: Topic II-5(c)(2), p. II-35

Official Position and Recommendation 8(3)

Urge the airlines and the FAA to enable westflow departures from the Oakland Airport engaged in a departure climb over or west of the San Francisco International Airport to gain altitude as steeply as practicable, and to refrain from the imposition of avoidable altitude restrictions during that climb.

Reference: Topic II-5(c)(3), p. II-35

Official Position and Recommendation 8(4)

Urge mass transit authorities to extend BART to San Jose in order to enable East Bay passengers to reach the San Jose Municipal Airport, so that noise impingement on the City of South San Francisco by Oakland-to-San Jose transbay flights can be eliminated.

Reference: Topic II-5(c)(4), p. II-36

Official Position and Recommendation 8(5)

Urge the FAA to develop safe and practicable southbound and southeastbound routes from the Oakland Airport over the waters of the San Francisco Bay.

Reference: Topic II-5(c)(5), p. II-37

Part Four: Concorde Supersonic Transport Airplanes

Policy 9

Help prevent the use of any airport runway in the San Francisco Bay Area by current production-model Concorde Supersonic Transport Airplanes (SST) or any other SST that is not certificated in accordance with requirements of FAR 36 for subsonic airplanes.

Official Position and Recommendation 9(1)

Urge the regional agencies involved in transportation planning or in a clearinghouse function relative to the approval of federal funds for airport facilities to maintain and support the position taken by ABAG in the Regional Aviation Plan of 1972, namely, that SST airplanes not certificated in accordance with the requirements of FAR 36 for subsonic airplanes shall not be admitted to airports in the San Francisco Bay Area.

Official Position and Recommendation 9(2)

Urge the Airports Commission of the City and County of San Francisco to maintain and support the position previously established by a resolution of the Airports Commission, namely, that SST airplanes not certificated in accordance with the requirements of FAR 36 for subsonic airplanes shall not be admitted to the San Francisco International Airport.

Official Position and Recommendation 9(3)

Urge the Board of Port Commissioners of the City of Oakland to adopt a formal resolution, pursuant to which SST airplanes not certificated in accordance with the requirements for FAR 36 for subsonic airplanes shall not be admitted to the Metropolitan Oakland International Airport.

Official Position and Recommendation 9(4)

Urge the Administrator of the Federal Aviation Administration, the Secretary of Transportation, the Civil Aeronautics Board, and the United States Congress to make any decision (whether favorable or unfavorable) regarding the operation of current production-model Concorde SST airplanes at any airport in the United States contingent on an express prohibition of the use of any runway in the San Francisco Bay Area by any supersonic airplane that is not certificated in accordance with the requirements of FAR 36.

Official Position and Recommendation 9(5)

Enlist the support of other municipalities in the Central and Southern San Francisco Bay Area for the Recommendations 9(1) through 9(4) made hereinabove.

Reference: Topic II-5(d), p. II-37

GOAL VI: ADOPT A CITY BUILDING NOISE-INSULATION ORDINANCE

Policy 1

Adopt a City Noise-Insulation Ordinance for dwellings.

Program 1(1)

Adopt a Noise-Insulation Ordinance modeled after Title 25, Section 1092, of The California Administrative Code.

Program 1(2)

Consider the inclusion of the energy conservation provisions of said Section 1092 in the Noise-Insulation Ordinance, thereby broadening it into an Energy and Noise Insulation Ordinance.

Program 1(3)

Consider an amplification of the Noise Insulation Ordinance (or Energy and Noise Insulation Ordinance) beyond the scope of current State Law, with regard to two alternatives, namely:

- (a) Inclusion of single-family dwellings which are constructed as part of a subdivision requiring a final subdivision map and which are located within a high-exposure area. (A sample draft is attached to Exhibit II-2 of Section II).
- (b) Inclusion of all detached single-family dwellings.

Program 1(4)

Publish a simple booklet to assist individual builders of single-family detached dwellings to achieve noise reduction and cooling-and-heating energy reduction at the least cost.

Reference: Topic IV-1, p. II-41

Program 1(5)

Consider the establishment of noise insulation requirements for non-residential buildings, such as office buildings, schools, institutional buildings of all kinds, and industrial plants.

Reference: Topic IV-2, p. II-41

Official Position and Recommendation 1(6)

Make recommendations to school authorities relative to noise-insulation requirements for existing and proposed schools.

GOAL VI (continued)

Program 1(7)

Establish a requirement that all proposed buildings that are to be located in a band 4,000 feet wide, centered upon a straight line midway between the centerlines of Runways 28 at the San Francisco International Airport*, must be free of structural elements that have a proper vibrational frequency of 100 Hz or less.

* Said straight line being defined by the Radial 281 of the San Francisco VOR.

GOAL VII: INCLUDE NOISE CONSIDERATIONS IN ALL FUTURE
LAND USE DECISIONS

Policy 1

Establish guidelines to assist the Planning Division in making staff proposals for future land use decisions, and to assist the Planning Commission and the City Council in evaluating them.

Program 1(1)

Perform a survey and an identification of those existing facilities and activities within the City which emit abatable noise, and an identification of sources of noise that appear unabatable.

Program 1(2)

Compile an inventory of current land uses that are deemed to be incompatible with existing unabatable noise sources.

Program 1(3)

Prepare a chart of potential land uses that would be compatible with existing unabatable noise sources.

Program 1(4)

Prepare a chart of potential land uses that would be compatible with all existing noise sources, whether or not they are abatable.

Program 1(5)

Develop noise performance standards to be incorporated into the City Zoning Ordinance for re-zonings, use permits, planned development approvals, precise plan approvals, and building permits in order to achieve the total annual exterior CNEL levels as recommended by land use category.

Reference: Topic V, p. II-42

GOAL VIII: PROTECT NOISE ABATEMENT FLIGHTPATHS BY ESTABLISHING
HEIGHT LIMITATIONS FOR PROPOSED BUILDINGS AND OTHER
STRUCTURES

Policy 1

Preserve the existing noise abatement flightpaths in the environs of the San Francisco International Airport through the establishment of maximum permissible elevations of proposed buildings and other structures within all of the cities adjacent to the Airport.

Program 1(1)

Cause Planning Staff and Consultants to draw and define with specificity a vertical planning boundary, comprising specified sloping planes, horizontal planes, and height-above-ground limits, for the guidance of planners, developers, and architects throughout the City, and submit the draft proposal to the City Planning Commission, together with an environmental impact report.

Official Position and Recommendation 1(2)

Enlist the cooperation of the other cities adjacent to the San Francisco International Airport, the Airport Land Use Committee of the County of San Mateo, the Management of the San Francisco International Airport, the air carriers and airline pilots and fixed-base operators operating thereat, the Federal Aviation Administration, the Environmental Protection Agency, and the public, to participate in the drafting and definition of said vertical planning boundary within which buildings and other structures can be constructed safely, without interfering with the safe and efficient flight of aircraft engaged in noise abatement departure and approach operations.

Reference: Plan for Height Limitations for Proposed Buildings, p. II-45

GOAL IX: PROTECTION OF NOISE ABATEMENT FLIGHTPATHS BY CONTROLLING
LIGHT SOURCES AND LIGHT REFLECTIONS WITHIN THE CITY TO
AVOID DISORIENTATION OF PILOTS

Policy 1

Establish, by ordinance of the City Council, building code regulations that prohibit the erection or operation of any object that could cause a pilot engaged in a noise abatement climb or descent to become disoriented either by emission or by reflection of light.

Program 1(1)

Draft an ordinance that would enable the City to require that proposed buildings or other structures in the City be so designed and constructed that there be no objectionable reflection of the light of the sun toward an aircraft engaged in a straight-in final approach toward a landing at the San Francisco International Airport, or an aircraft engaged in an initial straight climb following takeoff at the said Airport.

Program 1(2)

Draft an ordinance that would enable the City to prohibit the erection or operation of an object which directs a steady light or a flashing light of objectionable intensity, other than an FAA-approved navigational signal light or the like, toward an aircraft engaged in takeoff and approach operations as above defined.

Reference: Plan for Control of Light Sources and Light Reflections,
p. II-47



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PAGE 1

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2. Methodology

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References: [List of references]